

### REMARKS

Claims 1-48 are pending in the present application. Claims 39-47 are withdrawn in response to a restriction requirement. No new matter has been entered.

#### Double Patenting Rejection

Claims 1-38 and 48 are rejected under the judicially created doctrine of double patenting over claims 1-31 of U.S. Patent 6,981,367 B2. This rejection is traversed. However, to expedite prosecution, and pursuant to 37 CFR 1.321(c), Applicants respectfully submit a Terminal Disclaimer; therefore, the double patenting rejection has been overcome. "The filing of a terminal disclaimer simply serves the statutory function of removing the rejection of double patenting, and raises neither presumption nor estoppel on the merits of the rejection". *Quad Environmental Technologies Corp. v. Union Sanitary District*, 20 USPQ2d 1392, 1394-5 (Fed. Cir. 1991).

#### Rejection under 102(b)

Claims 1-38, and 48 are rejected under 102(b) in view of Caren (US 5,863,413). This rejection is respectfully traversed. Under MPEP 2131, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Caren fails to teach or suggest all elements of the claimed invention of independent claims 1 and 48.

Caren does not teach a hydrogen generation section as claimed. As Caren strongly emphasizes throughout the reference, the Caren apparatus includes a generator 20 for generating *hydroxyl radicals*, not hydrogen as claimed. Consequently, Caren fails to teach or suggest a hydrogen generation section as claimed, because it fails to teach or suggest the production of hydrogen. Because Caren fails to teach the claimed hydrogen generation section, Caren also fails to teach or suggest that the hydrogen generation section is configured to deliver hydrogen to the NOx treatment section.

Moreover, Caren also fails to teach that the hydrogen delivered to the NO<sub>x</sub> treatment section is substantially isolated from the delivery of oxygen to said NO<sub>x</sub> treatment section. Referring to Fig. 4 of Caren (shown below), Caren teaches a catalytic converter 13, which the examiner cites for teaching the claimed NO<sub>x</sub> treatment section.

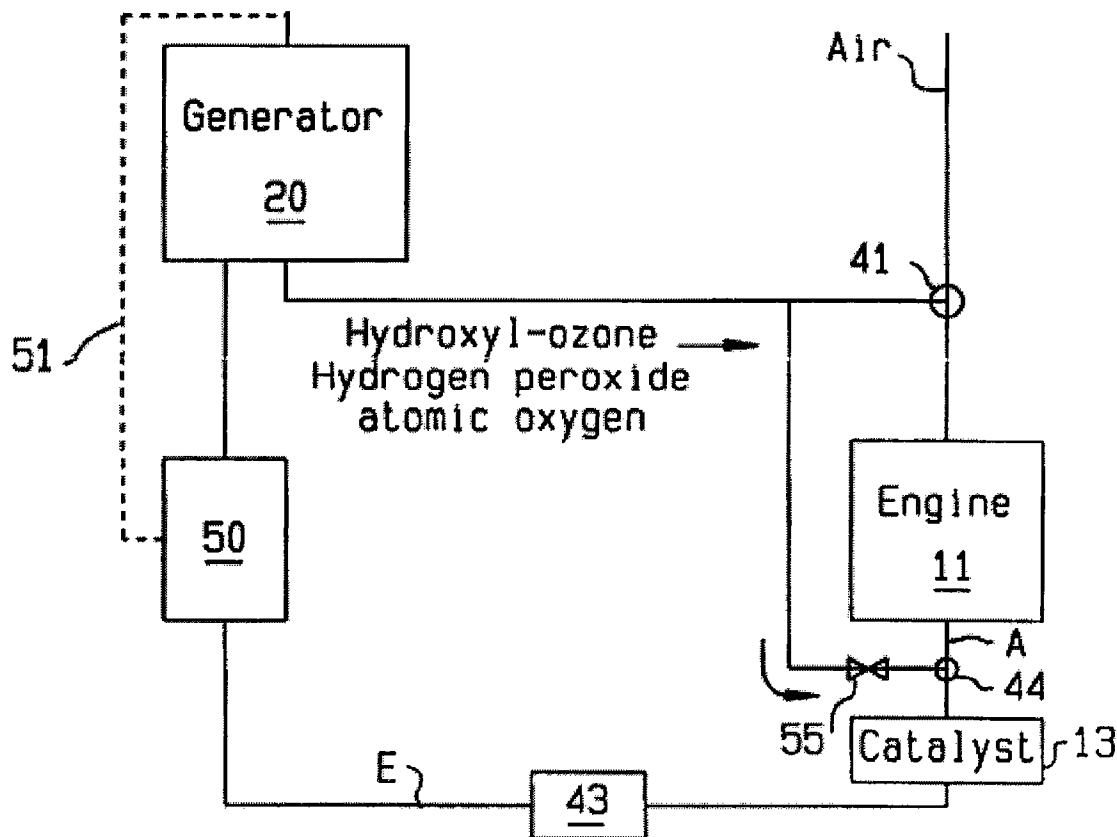


FIG. 4

Unlike the claimed NO<sub>x</sub> treatment section which receives separate feeds of hydrogen and oxygen, Caren teaches the mixing of hydroxyl from the generator 20 with exhaust A from the engine 11 at junction 44 prior to feeding the catalytic reactor 13. Assuming that oxygen is present in the exhaust stream A, the delivery of the hydroxyl stream and the delivery of the oxygen stream are not isolated from one another as claimed in claim 1 and 48. In the Caren system, these streams are combined at junction 44 and are delivered to the catalytic converter 13 as one feed stream, not isolated from one another as claimed in claims 1 and 48, or as shown, for example, in Fig. 1 of the present application. As a result, Caren does not anticipate claims 1 and 48, and all claims dependent thereon, thus the rejection under §102 should be removed.

Conclusion

The Applicants respectfully submit that, in view of the above remarks, the application is now in condition for allowance. The Examiner is encouraged to contact the undersigned to resolve efficiently any formal matters or to discuss any aspects of the application or of this response. Otherwise, early notification of allowable subject matter is respectfully requested.

Respectfully submitted,

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